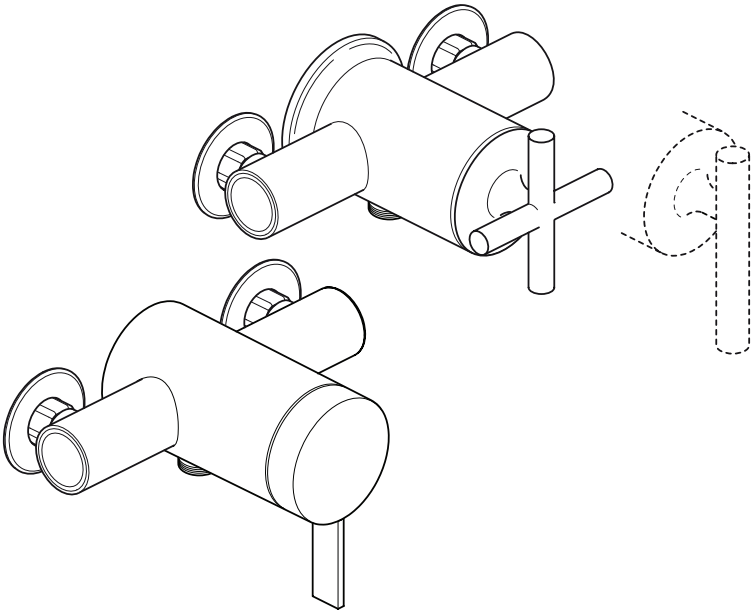
KOHLER®



Purist and Stillness Thermostatic Mixing Valves

Installation and User Guide

MODEL NUMBERS

12780W-4-CP, 12799W-3-CP, 12799W-4-CP

Important! Please quote the above model number(s) when ordering spares

IMPORTANT

INSTALLER: THIS MANUAL IS THE PROPERTY OF THE CUSTOMER AND MUST BE RETAINED WITH THE PRODUCT FOR MAINTENANCE AND OPERATIONAL PURPOSES.

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INTRODUCTION

Thank you for purchasing a quality Kohler product. To enjoy the full potential of your new product, please take time to read this guide thoroughly, having done so, keep it handy for future reference.

The Kohler Purist/Stillness Thermostatic Mixer is a Thermostatic Shower Control with a Single Sequential Knob for on/off and temperature control. It has been designed to compliment the Kohler Purist/Stillness Brassware range and is available with either a Lever or Cross Control Knob.

The Thermostatic Mixer incorporates a Wax Capsule Temperature Sensing Unit. This provides an almost immediate response to changes in pressures or temperature of the incoming water supplies to maintain the selected temperature. An adjustable Maximum Temperature Stop is provided which limits the temperature to the desired level. Inlet Filters are fitted to protect the Thermostatic Cartridge.

The Kohler Purist/Stillness Thermostatic Mixer is an exposed Shower Control for connection to wall mounted or rear entry pipework at centres of 153 mm.

Note! This Installation and User Guide relates to a range of Thermostatic Mixing Valves, therefore the illustrations may vary from your product.

Patents and Design Registration

Design Registration:	000684717, 000704416	
Patents:	GB:	2 291 693, 2 392 225, 2 421 297
	Germany:	695 13 455.8
	France:	0 694 721 (E)
	USA:	7 240 850
	Euro:	1 672 257 DE, FR, GB, IT, NL, SE
Patent Applications:	Euro:	03254070.0
	USA:	2007-0221740-A1, 2006-0124758-A1

If you experience any difficulty with the installation or operation of your new Thermostatic Mixer, please refer to **'Fault Diagnosis'**, before contacting Kohler Mira Ltd. Our contact details can be found on the back cover of this guide.

SAFETY : WARNINGS

Kohler thermostatic mixers are precision engineered and should give continued safe and controlled performance, provided:

1. They are installed, commissioned, operated and maintained in accordance with the manufacturer's recommendations.
2. Periodic attention is given, when necessary, to maintain the product in good functional order.

Caution!

1. Read all of these instructions.
2. Retain this guide for later use.
3. Pass on this guide in the event of change of ownership of the installation site.
4. Follow all warnings, cautions and instructions contained in this guide.
5. Anyone who may have difficulty understanding or operating the controls of any shower should be attended whilst showering. Particular consideration should be given to the young, the elderly, the infirm or anyone inexperienced in the correct operation of the controls.
6. Rapid/Excessive movement of the flow and/or temperature control levers may result in momentary unstable blend temperatures.
7. Care is required when adjusting flow or temperature, make sure that the temperature has stabilised.
8. When this product has reached the end of its serviceable life, it should be disposed of in a safe manner, in accordance with current local authority recycling, or waste disposal policy.

SPECIFICATIONS

Operating Parameters

Pressures

- Max Static Pressure: **10 Bar**.
- Max Maintained Pressure: **5 Bar**.
- Min Maintained Pressure (Gravity System): **0.1 Bar** (0.1 bar = 1 Metre head from cold tank base to shower handset outlet).

  Note! For gravity fed / other low pressure systems (0.5 bar or below) do not fit the flow regulator.
- For optimum performance supplies should be nominally equal.

Temperatures

- Factory Pre-set (Blend) Shower: **43°C**.
- Optimum Thermostatic Control Range: **35°C to 43°C** (achieved with supplies of 15°C cold, 65°C hot and nominally equal pressures).
- Recommended Hot Supply: **60°C to 65°C**.

  Note! The mixing valve can operate at higher temperatures for short periods without damage, however this could detrimentally affect thermostatic performance. For safety and performance reasons it is recommended that the maximum hot water temperature is limited to **65°C**.
- Cold Water Range: up to **25°C**.
- Minimum Recommended Differential between Hot Supply and Outlet Temperature: **12°C**.

Thermostatic Shut-down

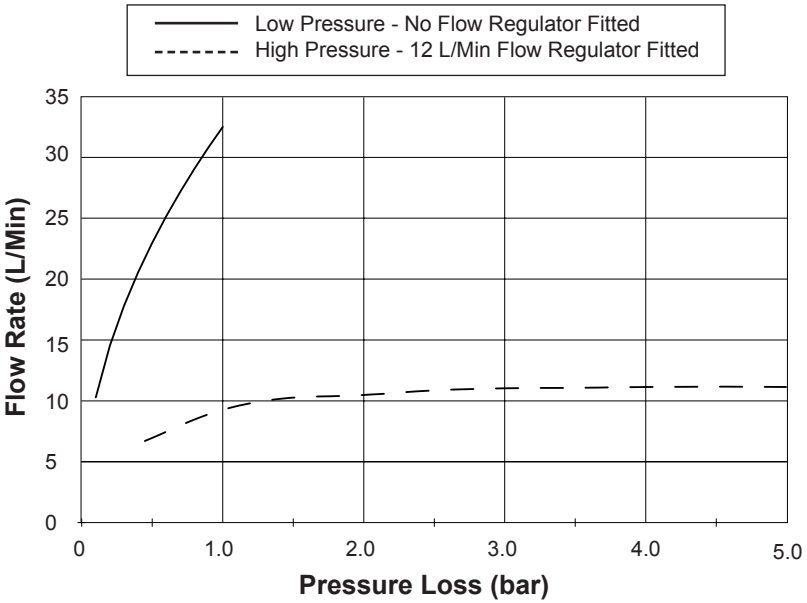
- For safety and comfort the thermostat will shut off the mixing valve **within 2 Seconds** if either supply fails (achieved only if the blend temperature has a minimum differential of 12°C from either supply temperature).

Connections

- Inlets: 15 mm Compression.
- Outlet: ½" BSP Flat Face / 15 mm Compression
- Standard connections are: **hot - left, cold - right, outlet - bottom**.

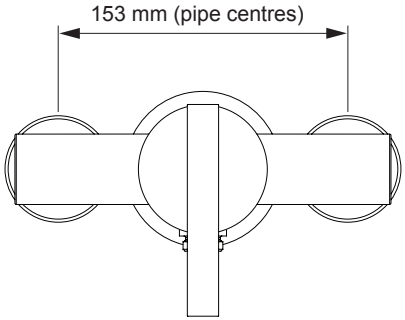
Flow Rates

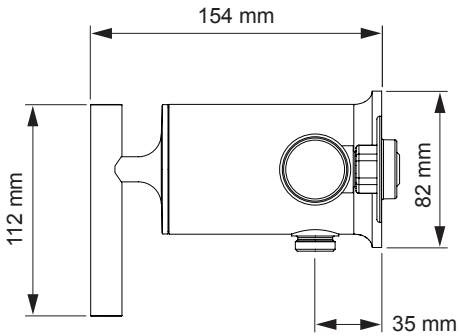
Typical Flow Rates (Valve Only)



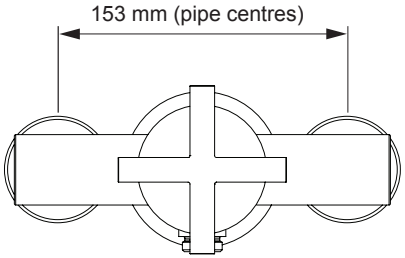
DIMENSIONS

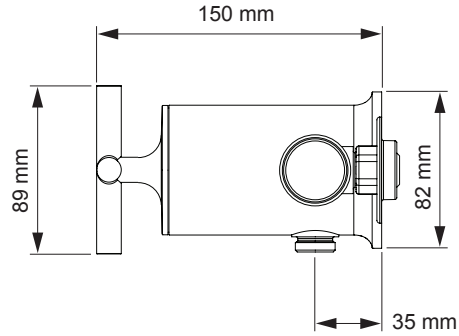
Kohler Purist (lever)



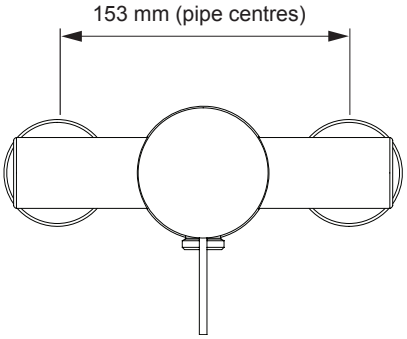


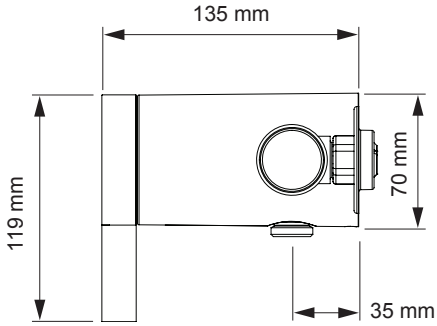
Kohler Purist (cross)





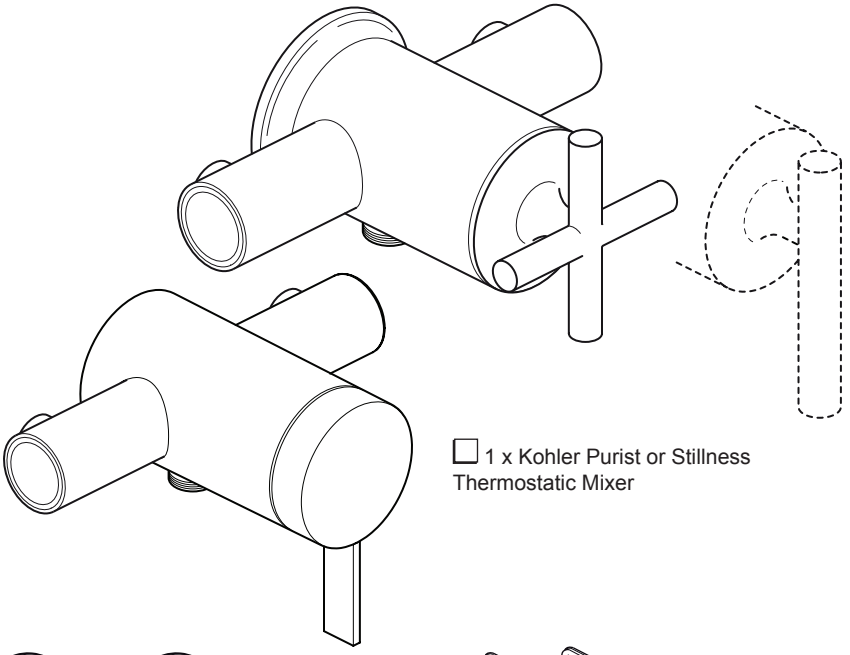
Kohler Stillness



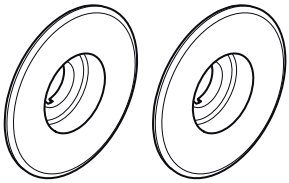


PACK CONTENTS

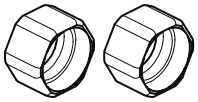
Tick the appropriate boxes to familiarise yourself with the part names and to confirm that the parts are included.



☐ 1 x Kohler Purist or Stillness Thermostatic Mixer



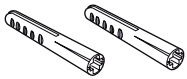
☐ 2 x Concealing Plates



☐ 2 x Compression Nuts

☐ 2 x Olives

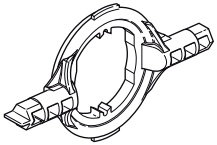
☐ 1 x 12 L/Min Flow Regulator



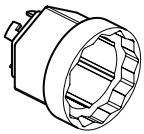
☐ 2 x Wall Plugs

☐ 2 x No 8 x 1 ¼" Securing Screws

☐ 1 x 2.5 mm Hexagon Key



☐ 1 x 'O' Key



☐ 1 x Cartridge Removal Socket

Documentation

☐ 1 x Installation Template

INSTALLATION

Suitable Plumbing Systems

Gravity Fed:
The thermostatic mixer must be fed from a cold water cistern (usually fitted in the loft space) and a hot water cylinder (usually fitted in the airing cupboard) providing nominally equal pressures.

Mains Pressurised Instantaneous Hot Water System (Combination Boiler):
The thermostatic mixer can be installed with systems of this type with balanced pressures (Recommended Minimum Maintained Pressure: **1.0 Bar**).

Unvented Mains Pressure System:
The thermostatic mixer can be installed with an unvented, stored hot water system.

Pumped System:
The thermostatic mixer can be installed with an inlet pump (twin impeller). The pump must be installed in a suitable location and in accordance with its instructions.

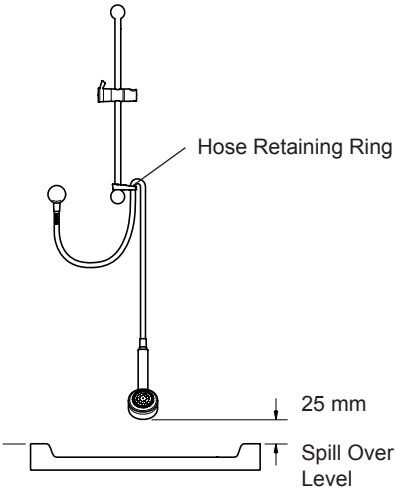
General

Installation must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel.
The installation must comply with the “Water Supply Regulations 1999 (Water Fittings)” or any particular regulations and practices, specified by the local water company or water undertakers.
Note! Make sure that all site requirements correspond to the information given in the section: **‘Specifications’**.

1. The Mixer must not be installed in an area where it may freeze.
2. For stud partitions alternative fixings may be required.
3. Isolating valves **must** be installed close to the Mixer for ease of maintenance.
4. Pipework must be rigidly supported and avoid any strain on the connections.
5. Pipework dead-legs should be kept to a minimum.

6. Decide on a suitable position for the Mixer. The position of the Mixer and the Shower Fittings must provide a minimum gap of 25 mm between the spill-over level of the shower tray/ bath and the handset. For further information on the installation of your **Shower Fittings**, refer to the Fittings Installation and User Guide.

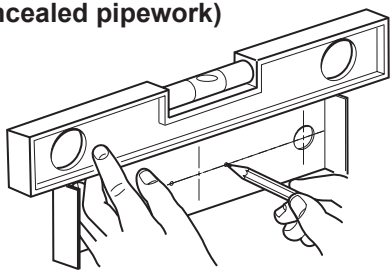
Note! Only use Shower Fittings recommended by the manufacturer or supplier.



1. Rear Entry Supplies (rising or falling concealed pipework)

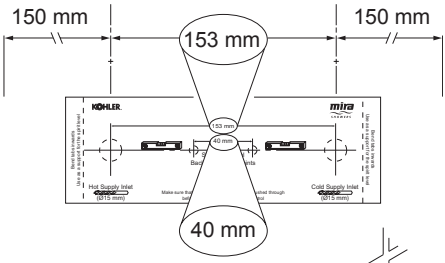
1.1 Use the Installation Template to mark the positions of the holes for the Backplate and the pipe centres.

Note! Allow a minimum of 150 mm either side of the Thermostatic Mixer, to allow access to the hot and cold Inlet Filters for servicing.



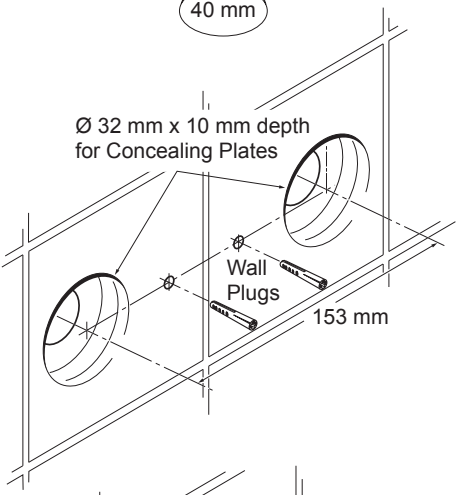
1.2 For solid walls drill the Backplate holes with a 6 mm diameter drill and insert the Wall Plugs (supplied). For other types of wall structure alternative fixing may be required (not supplied).

1.3 Drill the supply pipe holes at 153 mm centres.



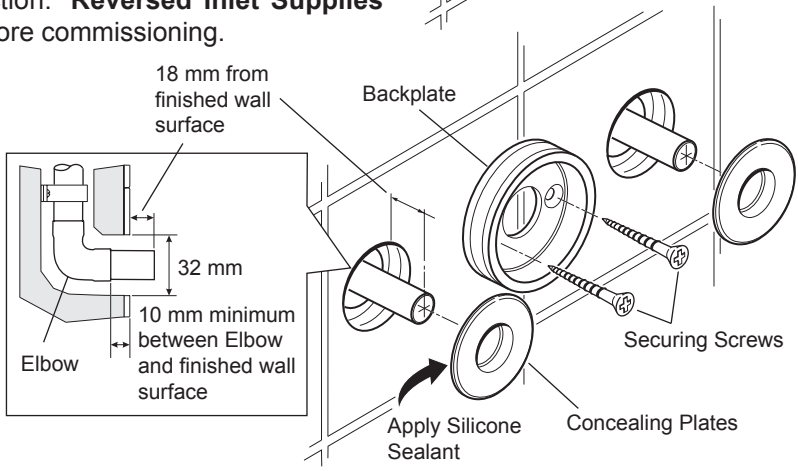
1.4 Recess the wall to allow for the Concealing Plates, Ø 32 mm x 10 mm deep.

Note! Depth must be sufficient to prevent the Concealing Plates fouling on the plumbing Elbows.



1.5 Fit the supply pipework (Hot - Left, Cold - Right). The pipework must project 18 mm from the finished wall surface at 153 mm centres (use the Installation Template as a guide).

Note! If the connections are reversed, complete the installation then refer to section: **'Reversed Inlet Supplies'** before commissioning.



1.6 Loosen the Grubscrew with the 2.5 mm Hexagon Key (supplied) and remove the Trim Ring (some models) and Backplate from the Thermostatic Mixer.

1.7 Secure the Backplate to the wall using the Securing Screws (supplied).

1.8 Fit the Concealing Plates.

Note! Apply silicone sealant to the back face of the flange.

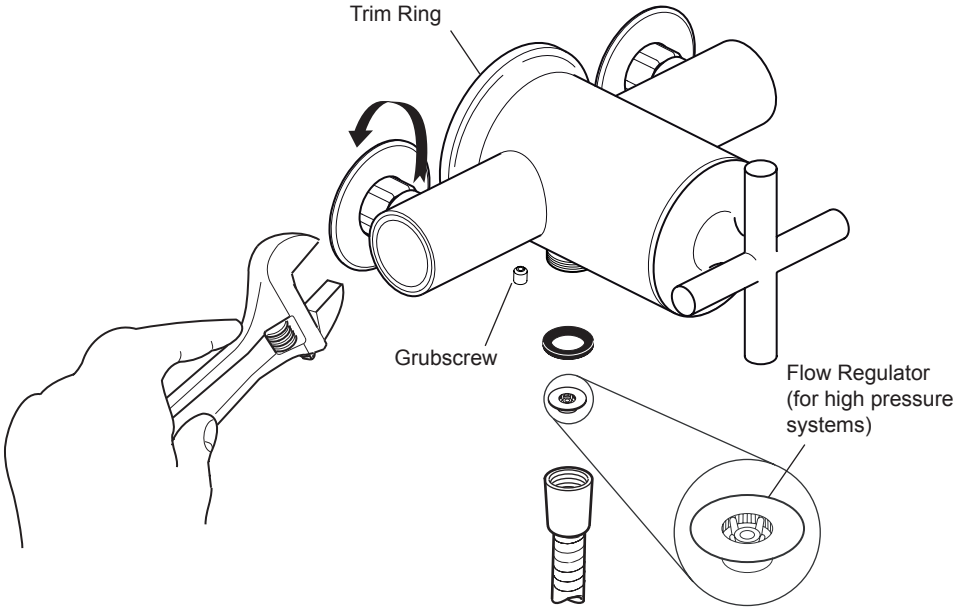
Caution! It is essential at this point that the supply pipework is thoroughly flushed through before connection to the Thermostatic Mixer. Failure to do so may result in product malfunction.

1.9 Fit the Compression Nuts and Olives onto the pipework.

1.10 Refit the Trim Ring (some models) and align the Thermostatic Mixer with the pipework and fit onto the Backplate.

1.11 Tighten the Compression Nuts onto the Thermostatic Mixer with a suitable Spanner.

Caution! Take care not to damage the chrome surfaces.



1.12 Align the Trim Ring (some models) and tighten the Grubscrew with a 2.5 mm Hexagon Key (supplied) to secure the Thermostatic Mixer to the Backplate.

1.13 Fit the Shower Fittings, refer to your Fittings Installation and User Guide for instructions.

Note! For high pressure systems, a 12 litre/minute flow regulator (supplied) can be fitted under the hose washer.

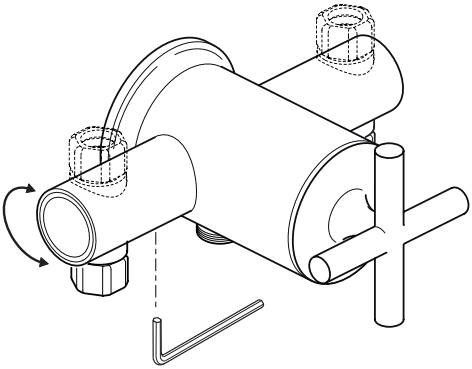
1.14 Turn on the hot and cold water supplies and check for leaks.

1.15 The Maximum Temperature of the Thermostatic Mixer is factory set to approximately 43°C. If adjustment is required, refer to section: **'Commissioning'**.

2. Rising or Falling Supplies

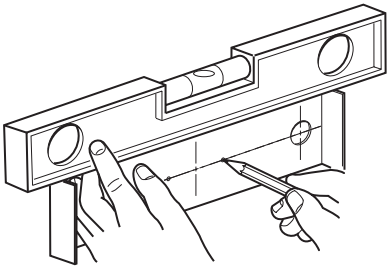
2.1 Loosen the Grubscrew on each Elbow using the 2.5 mm Hexagon Key (supplied) and rotate the Elbow 90° as required. Retighten the Grubscrews.

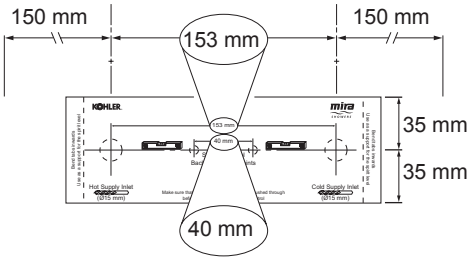
Note! Do not overtighten.



2.2 Use the Installation Template to mark the positions of the fixing holes for the Backplate.

Note! Allow a minimum of 150 mm either side of the Thermostatic Mixer, to allow access to the hot and cold Inlet Filters for servicing.

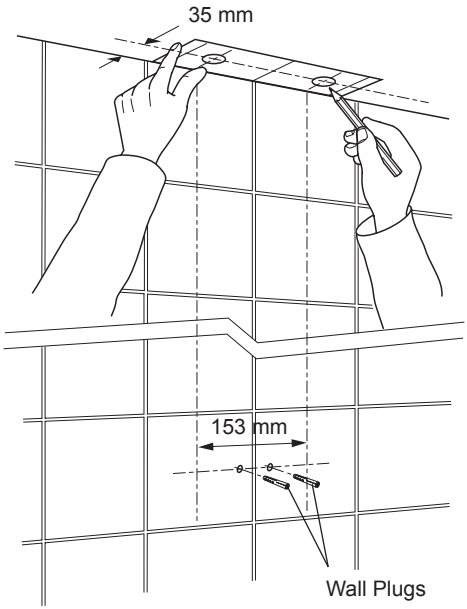




2.3 For solid walls drill the holes for the Backplate with a 6 mm drill and insert the Wall Plugs (supplied). For other types of wall structure alternative fixings may be required (not supplied).

2.4 **For Falling Supplies:** Using the Installation Template as a guide, mark the pipe positions on the ceiling and set the 35 mm centres from the finished wall (refer to illustration).

For Rising Supplies: Using the Installation Template as a guide, mark the pipe positions and set the 35 mm centres from the finished wall.



2.5 Fit the supply pipework, 35 mm from the finished wall surface to the centre of the pipes.

Note! The inlet connections are **Hot - Left, Cold - Right** as standard. If the hot and cold water supply pipes have been reversed complete the installation then refer to section: **'Reversed Inlet Supplies'** before commissioning.

2.6 Loosen the Grubscrew with the 2.5 mm Hexagon Key (supplied) and remove the Trim Ring (some models) and Backplate from the Thermostatic Mixer.

2.7 Secure the Backplate to the wall using the Securing Screws (supplied).

Caution! It is essential at this point that the supply pipework is thoroughly flushed through before connection to the Thermostatic Mixer. Failure to do so may result in product malfunction.

2.8 Fit the Compression Nuts and Olives onto the pipework.

2.9 Refit the Trim Ring (some models) and align the Thermostatic Mixer with the pipework and fit onto the Backplate.

2.10 Tighten the Compression Nuts onto the Thermostatic Mixer with a suitable Spanner.

Caution! Take care not to damage the chrome surfaces.

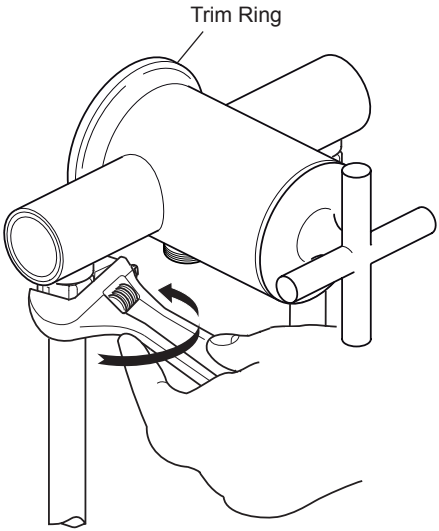
2.11 Align the Trim Ring (some models) and tighten the Grubscrew to secure the Thermostatic Mixer to the Backplate.

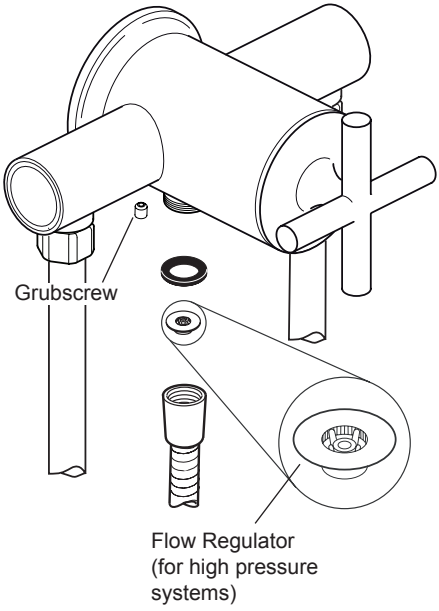
2.12 Fit the Shower Fittings, refer to your Fittings Installation and User Guide for Instructions.

Note! For high pressure systems, a 12 litre/minute flow regulator (supplied) can be fitted under the hose washer.

2.13 Turn on the hot and cold water supplies and check for leaks.

2.14 The Maximum Temperature of the Thermostatic Mixer is factory set to approximately 43°C. If adjustment is required, refer to section: **'Commissioning'**.

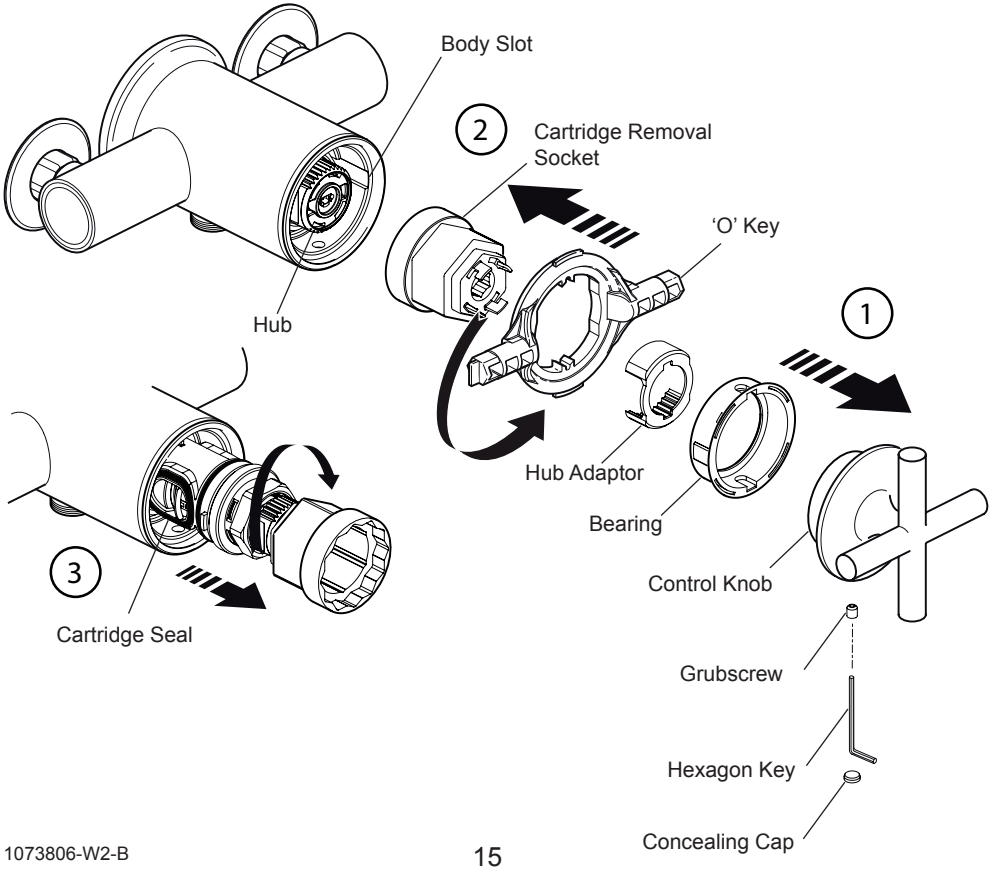




REVERSED INLET SUPPLIES

Kohler Purist/Stillness Thermostatic Mixers are supplied with inlet connections **Hot - Left, Cold - Right** and **Bottom - Outlet** as standard. If the hot and cold water supply pipes have been reversed during installation the Thermostatic Cartridge must be removed and rotated 180°.

1. Isolate the hot and cold water supplies.
2. Remove the Concealing Cap, loosen the Control Knob Grubscrew (by approximately 4 turns) with the 2.5 mm Hexagon Key (supplied) and pull off the Control Knob, Bearing and Hub Adaptor.
4. Fit the Cartridge Removal Socket (supplied) onto the Cartridge Nut.
5. Fit the 'O' Key (supplied) onto the Cartridge Removal Socket, turn anticlockwise and unscrew fully.
6. Invert the Cartridge Removal Socket and align the lugs with the slots in the Hub. Rotate the Cartridge Removal Socket clockwise to lock the lugs into the Hub and pull the Cartridge from the Mixer Body.
7. Rotate the Cartridge 180°.



8. Check that the two Cartridge Inlet Seals are fitted and carefully push into the Body, aligning the Cartridge Lugs into the Body Slots.

   Note! Make sure that the Cartridge Lug stamped ‘H’ is aligned with the hot inlet supply.

   Important! Take care when fitting the Cartridge as damage to the Cartridge Inlet Seals may result in dripping from the Shower Head.
9. Tighten the Nut by turning the ‘O’ Key clockwise.

   Note! Use the Cartridge Removal Socket and ‘O’ Key together.
10. Align the lugs on the Bearing with the slots in the Body and fit in position.
11. Make sure that the Hub is positioned fully clockwise and refit the Hub Adaptor and Control Knob with the Grubscrew at the bottom, retighten the Grubscrew and refit the Concealing Cap.
12. Before using the Shower, refer to section: **‘Commissioning’**.

COMMISSIONING

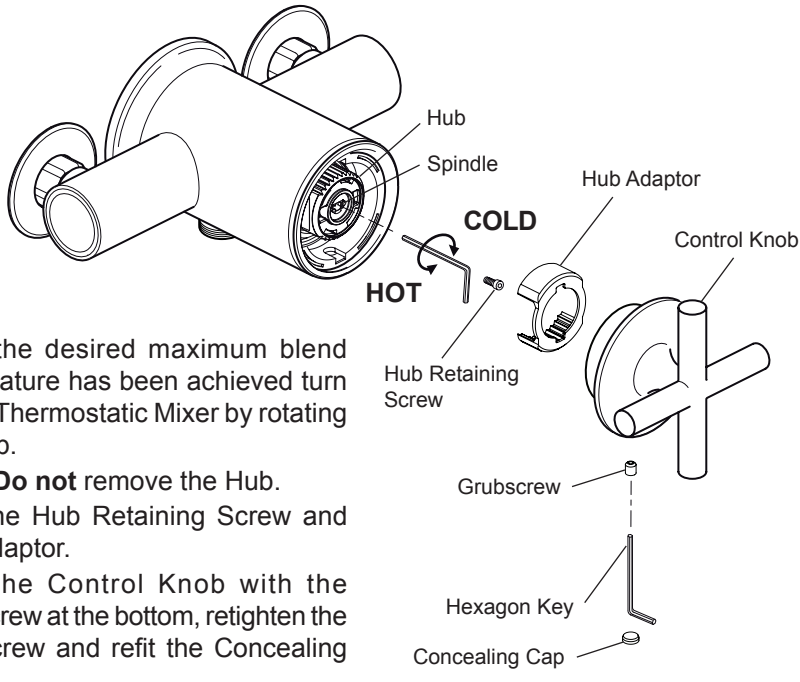
Maximum Temperature Setting

The Maximum Temperature of the Thermostatic Mixer is factory set to approximately 43°C. If adjustment is required, set the maximum temperature as follows:

Note! Make sure that the hot water temperature is at least 10°C above the required maximum showering temperature.

1. Turn on the Thermostatic Mixer to the maximum temperature (i.e. fully anticlockwise) and allow the temperature to stabilise.
2. Remove the Concealing Cap, loosen the Control Knob Grubscrew (by approximately 4 turns) with the 2.5 mm Hexagon Key (supplied) and pull off the Control Knob.
3. Remove the Hub Adaptor and unscrew the Hub Retaining Screw with a 2.5 mm Hexagon Key (supplied).

   Note! Do not remove the Hub.
4. Insert the 2.5 mm Hexagon Key into the centre of the Spindle and engage with the recessed Temperature Adjusting Screw.
5. Rotate the Hexagon Key until the required maximum temperature is obtained at the discharge point. Anticlockwise to increase the temperature, or clockwise to decrease the temperature (¼ turn = 1°C).



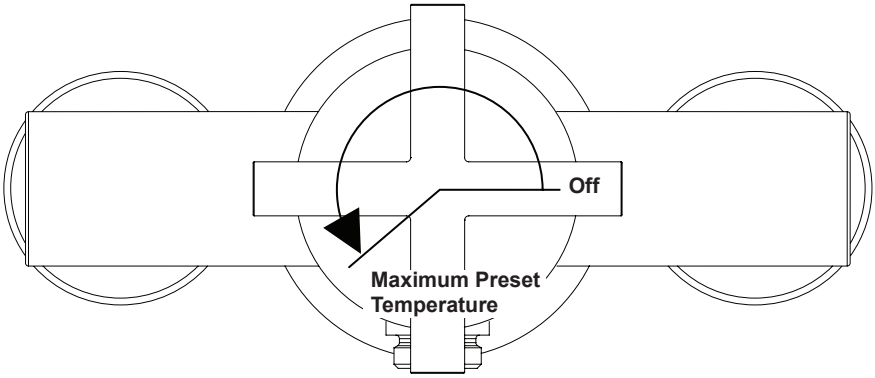
6. Once the desired maximum blend temperature has been achieved turn off the Thermostatic Mixer by rotating the Hub.

   Note! Do not remove the Hub.
7. Refit the Hub Retaining Screw and Hub Adaptor.
8. Refit the Control Knob with the Grubscrew at the bottom, retighten the Grubscrew and refit the Concealing Cap.

OPERATION

Kohler Purist/Stillness Thermostatic Mixers are Thermostatic Shower Controls with a Single Sequential Control Knob for on/off and temperature control.

The Control Knob operates anti-clockwise in the following sequence:



Off ➡ Cold ➡ Warm ➡ Maximum Preset Temperature

FAULT DIAGNOSIS

Symptom	Cause / Rectification
1. Only hot or cold water from the Thermostatic Mixer outlet.	**a.** Inlets reversed (hot supply to cold supply). Refer to section: **'Reversed Supplies'**. **b.** No hot water reaching the Thermostatic Mixer. **c.** Check the Filters for any blockage. **d.** Installation conditions outside operating parameters: refer to sections: **'Specifications'** and **'Commissioning'**.
2. Fluctuating or reduced flow rate.	**a.** Check the Showerhead, Hose and Filters for any blockage. **b.** Make sure the maintained inlet pressures are nominally balanced and sufficient, refer to section: **'Specifications'**. **c.** Make sure the inlet temperature differentials are sufficient, refer to section: **'Specifications'**. **d.** Flow Regulator fitted incorrectly. **e.** Airlock or partial blockage in pipework.
3. No flow from the Thermostatic Mixer outlet.	**a.** Check the Showerhead, Hose and Filters for any blockage. **b.** Hot or cold supply failure.
4. Blend temperature drift.	**a.** Refer to symptom **2.** above. **b.** Significant supply temperature fluctuation. **c.** Significant supply pressure fluctuation. **d.** Faulty Thermostatic Cartridge, renew.
5. Maximum blend temperature setting too hot or too cold.	**a.** Indicates incorrect maximum temperature setting; refer to section: **'Commissioning'**. **b.** Refer to symptom **4.** above.
6. Water leaking from the Showerhead.	**a.** Normal for a short period after shut off. **b.** Check that the pressures are not in excess of the specifications for product. **c.** Cartridge Inlet Seals damaged, renew. **d.** Renew the Thermostatic Cartridge.
7. Flow rate too low or too high.	**a.** (low) Insufficient supply pressures. **b.** (high) Supply pressure too high. Install Flow Reg. **c.** Refer to symptom **2.** above.

MAINTENANCE

General

This Product is precision engineered and should give continued safe and controlled performance, provided:

1. It is installed, commissioned, operated and maintained in accordance with manufacturers recommendations.
2. Periodic attention is given, when necessary, to maintain the product in good functional order.

Kohler Purist/Stillness Thermostatic Mixers are designed for the minimum of maintenance in normal use. If a malfunction occurs with the Thermostatic Cartridge then this will necessitate a complete cartridge replacement.

Note! The cartridge contains no internally serviceable parts.

Lubricants

Silicone-only based lubricants can be used to assist in refitting.

Caution! Oil based or other lubricant types, may cause rapid deterioration of seals.

Cleaning

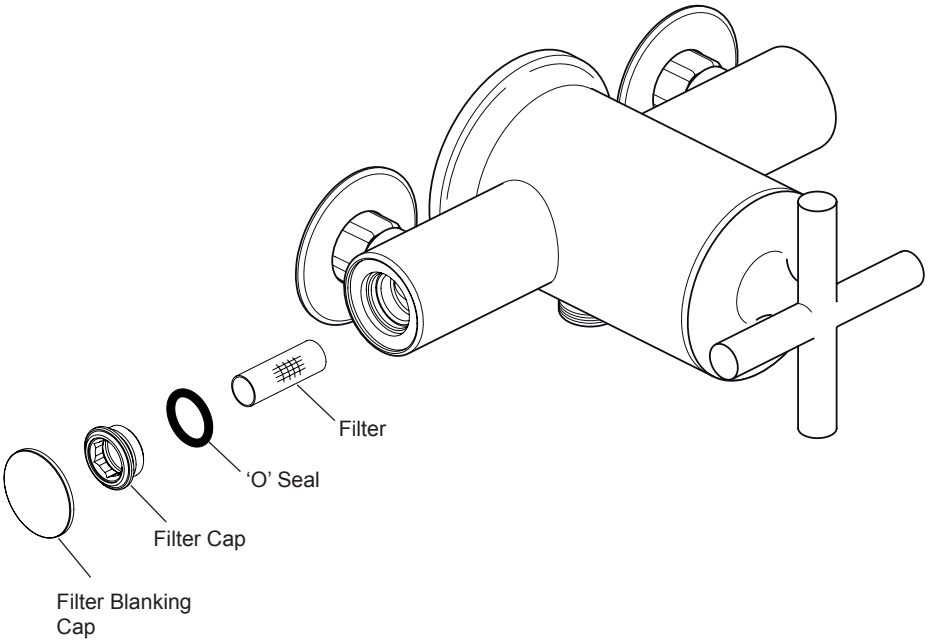
Warning! Many household cleaners contain abrasive and chemical substances, and should not be used for cleaning plated or plastic fittings. These finishes should be cleaned using a mild washing up detergent or soap solution, rinsed and then wiped dry with a soft cloth.

Inlet Filters

Important! The Inlet Filters should be checked and cleaned as necessary every 12 months.

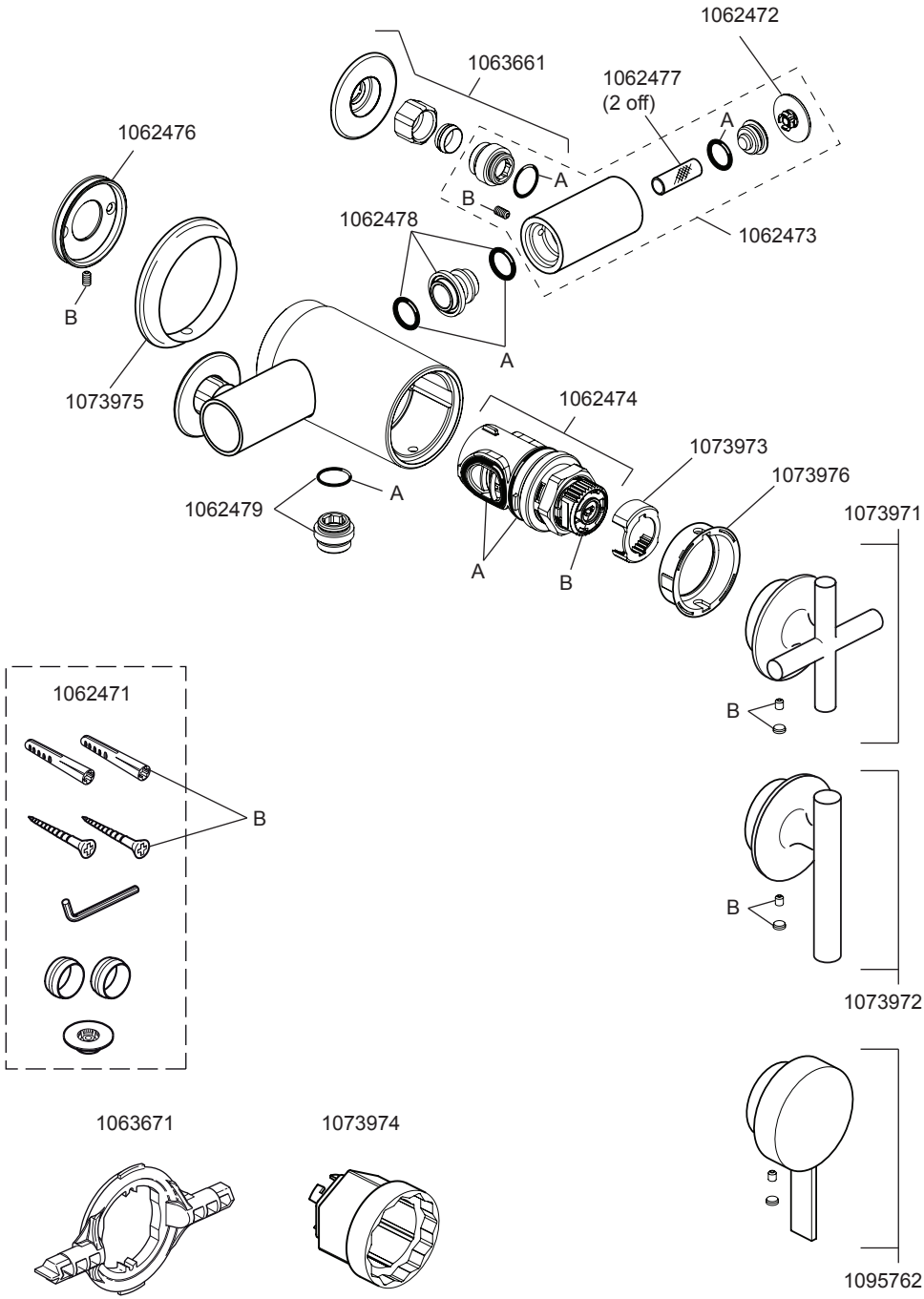
Note! The Inlet Filters must not be removed except for cleaning. If the Thermostatic Mixer is operated without the Inlet Filters fitted the Warranty on the product will be void.

1. Isolate the hot and cold water supplies and operate the Control Knob to drain any residual water.
2. Remove the Filter Blanking Caps and unscrew the Filter Caps with the 'O Key' (supplied) or a 12 mm hexagonal wrench and remove the Filters.
3. Clean each Filter in turn under a jet of water to remove any lodged particles.
4. Refit the Filters and tighten the Filter Caps.
   Note! Make sure that the seal is fitted correctly and not damaged.
5. Refit the Filter Blanking Caps.
6. Turn on the hot and cold water supplies and check for leaks.



SPARE PARTS

1062470	Seal Pack (identified ‘A’)
1062471	Component Pack
1062472	Elbow Cap
1062473	Elbow Assembly
1062474	Cartridge Assembly
1062476	Backplate
1062477	Filter Pack (x 2)
1062478	Elbow Connector Pack
1062479	Outlet Connector Pack
1063660	Screw Pack (identified ‘B’)
1063661	Inlet Connector Pack
1063671	‘O’ Key
1073971	Control Knob (Purist - Cross)
1073972	Control Knob (Purist - Lever)
1073973	Hub Adaptor
1073974	Cartridge Removal Socket (*also included with 1062474)
1073975	Trim Ring (Purist models only)
1073976	Bearing
1095762	Control Knob (Stillness - Lever)


1062472
1063661
1062477
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1062476
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1062478
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1073973
1073976
1073971
1062479
A
A
B
B
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1063671
1073974
1095762

CUSTOMER SERVICE

Guarantee of Quality

Kohler UK guarantee products against any defect of materials or workmanship for the following periods

25 Years
Ceramic Ware and Cast Products

10 Years
Stainless Steel Products and, Acrylic Baths

5 Years
Shower Valves, Taps, Cistern Fittings, Toilet Seats and Bath Panels

2 Years
Bathroom Furniture and Accessories

1 Year
Whirlpool / Spa Baths

Our confidence in the quality and reliability of our superior products enables us to offer a comprehensive guarantee for all products.

To register and fully benefit from this guarantee you must return the enclosed product registration card indicating the Kohler items you have purchased.
Within the guarantee period we will undertake to resolve any material defects, by providing replacement parts, modules or complete product, as we deem appropriate. To be free of charge, work must only be undertaken by Kohler UK approved personnel.
To ensure that any problems can be promptly resolved you must contact Kohler UK directly.
Proof of purchase must be provided with any claims.

This guarantee covers products in domestic use, installed and maintained in accordance with the instructions. It covers the purchaser only and is not transferable.

Commercial / Business Use

Any Kohler Bathroom product used within a commercial / business premise is guaranteed for **1 Year** against any defect of materials or workmanship.

Not Covered by this Guarantee

Damage or defects arising from incorrect installation, improper use or lack of maintenance.
Installed product damaged in transit Consequential loss, damage or product removal and installation costs.
General wear and tear.

This guarantee is in addition to your statutory and other legal rights.

To Contact Us

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Tel: 0870 240 7896
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Website: www.kohleruk.com

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Fax: 01242 282 595
Email: technical@mirashowers.com
Website: www.kohleruk.com

All other Kohler Products
Tel: 0870 850 5551
Fax: 0870 850 5552
Email: info@kohleruk.com
Website: www.kohleruk.com

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The company reserves the right to alter product specifications without notice.

KOHLER.

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